



Snooze

Inspiring consistent sleep patterns through tracking, machine learning, and optimization.

Overview

Sleep struggle is something that many people across all ages and various walks of life struggle with. There are several products on the market to help aid sleep, from physical products such as eye masks to meditation apps such as Calm. However, we still see a daily struggle for many individuals that affects their physical and mental health. Using human-centered design methods, we set out to find a solution to help night shift workers in the healthcare industry regain control of their lives through more consistent sleep.

Phase 1: Identify

Opportunity Space: Improving Sleep Patterns

Social, Economic, and Technological (SET) Factors

Social	Economic	Technological
<ul style="list-style-type: none"> • Revenge Bedtime Procrastination • Poor Time Management • Substance Abuse • Lack of Education & Knowledge 	<ul style="list-style-type: none"> Insufficient Sleep leads to <ul style="list-style-type: none"> ◦ Lower Productivity ◦ Healthcare Utilization Costs 	<ul style="list-style-type: none"> Excess Screen Time Bright/Blue Light Virtual Environment & Remote Work

Product Opportunity Gap (POG) Generation



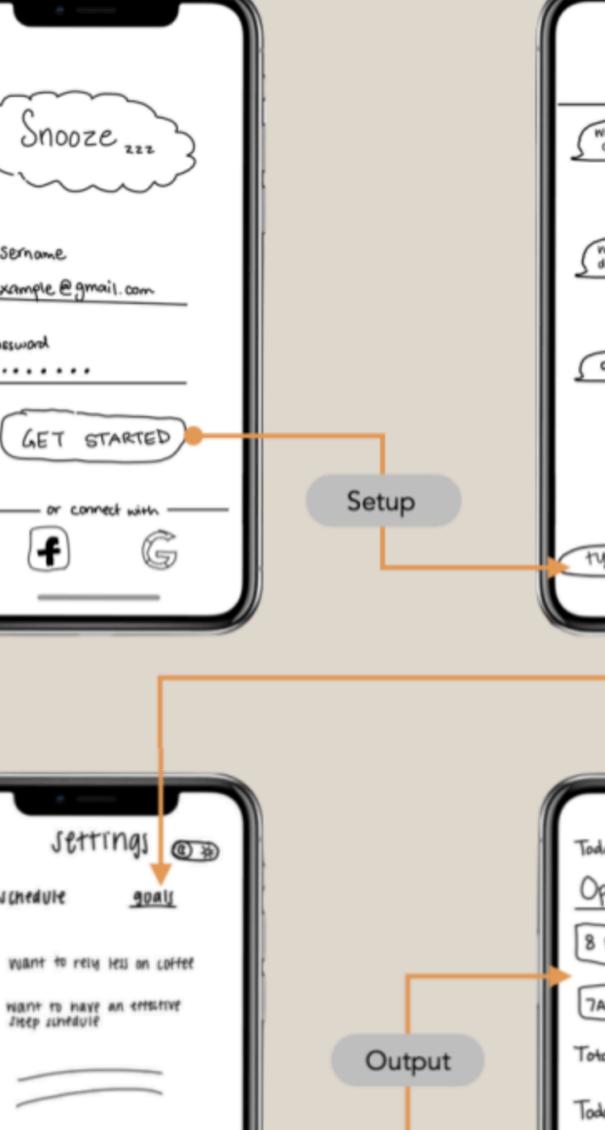
To narrow in on a specific opportunity statement, our team generated 25 POGs and used *Affinity Diagramming* to understand the space of our opportunity better and combine ideas where applicable.

To further help decide on a final POG, our team created a *Weighted Selection Matrix* ranked by criteria we found important to the long term success of the project. Using the insights from this matrix, we were able to decide on a final POG.

Criteria	POGs									
	How might we help adults who work night shifts create and keep consistent sleep schedules?	How might we improve night shift workers' sleep patterns while constantly changing their schedule?	How might we help adults who work night shifts create and keep consistent sleep schedules?	How might we make sleep more attractive for night shift workers?	How might we encourage night shift workers to make sleep a priority in their daily routine?	How might we encourage night shift workers to make sleep a priority in their daily routine?	How might we provide weekly reminders to night shift workers to make sleep a priority in their daily routine?	How might we encourage night shift workers to make sleep a priority in their daily routine?	How might we encourage night shift workers to make sleep a priority in their daily routine?	How might we encourage night shift workers to make sleep a priority in their daily routine?
Specificity	0.2	2	5	4	3	3	4	5	3	4
Generalized	0.1	4	3	3	3	3	4	4	3	4
Feasibility/Accuracy	0.3	4	3	3	2	2	1	4	2	3
Demonstrated/Accuracy	0.4	3	3	4	3	3	5	3	4	3
Total	1	32	37	38	27	27	39	39	37	32

Final POG: How might we enable night shift workers in the healthcare industry to create and keep consistent sleep schedules?

Key Stakeholders

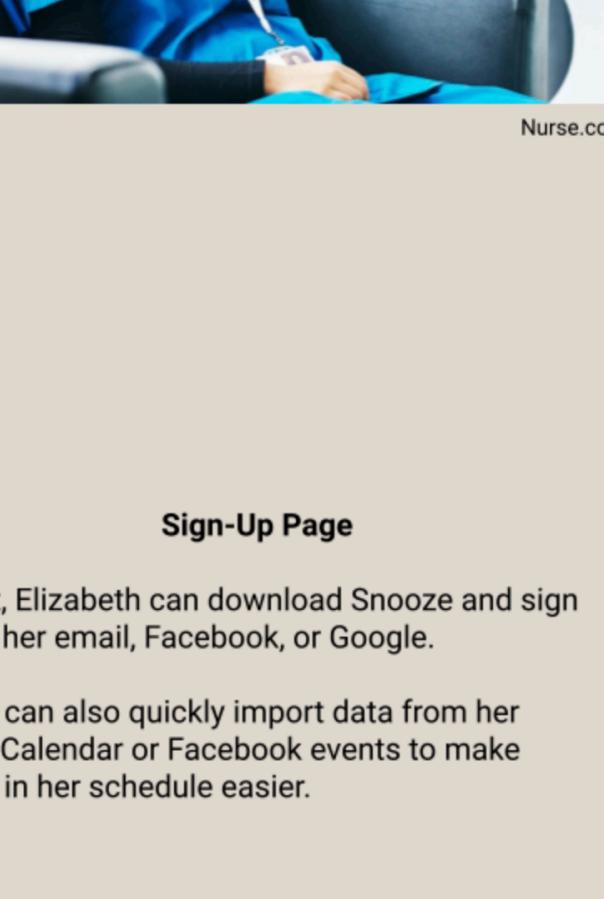


This Stakeholder Map helped us identify both our key stakeholders and other stakeholders that may be involved throughout the design process. Going forward, we focused our user research around night shift workers in the healthcare industry.

Phase 2: Understand

User Interviews

After compiling a list of interview questions, we contacted night shift nurses to better understand the user through *ethnography*. Simultaneously, we worked on *user observation* by taking note of certain mannerisms the interviewee had, and confirming with them whether or not it was a result of their sleep habits. We noticed the following trends and key takeaways.

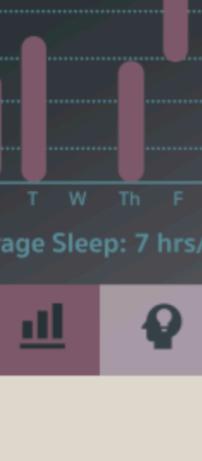


As a synthesis method for our findings and to help us understand why our users were making certain choices, we created this *Empathy Map*. Engaging in this process really helped us organize the pain points of our users and empathize with their plights as we strive to ideate a solution to help them.

Additionally, the following two personas further contextualizes our opportunity and allowed us to revise our POG to focus on the fact that our stakeholders felt they did not have control of their lives.

Revised POG: How might we enable night shift workers in the healthcare industry to regain control of their lives through more consistent sleep?

User Personas



The "Mother"

Situation: Night shift medical worker who works 11pm - 7am shifts and constantly needs to take her kids to school, sports practice, etc.

Pain points: Is always pressed for time during weekdays because of her children's schoolwork and extracurricular activities.

Goal: Balance time between taking care of the kids/pets and getting adequate sleep.



The "Controller"

Situation: Medical worker working both day and night shifts who has been a nurse for several years.

Pain points: Is afraid of being dependent on drugs or other mechanisms so refuses to use sleep devices to get consistent sleep.

Goal: Get adequate sleep using a crutch that enables them to retain control and independence.

Value Opportunity Attributes (VOA) & Product Requirements

	Emotion	Ergonomics	Aesthetics	Identity	Impact	Core Tech.	Quality
Specificity	LOW	MED	HIGH	LOW	LOW	LOW	LOW
Generalized	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Feasibility/Accuracy	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Demonstrated/Accuracy	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Total	0.25	0.15	0.15	0.2	0.05	0.01	0.01

Must not be an addictive substance or affect the user's neurotransmitters.

Must be consistent in encouraging and providing healthy sleep schedules.

Should be comfortable to look at at night through muted colors or by implementing dark mode.

Dashboard
The dashboard shows Elizabeth her schedule. Based on her schedule, Snooze will show her the range of optimal sleep times on certain days. Even if her schedule isn't fully filled in for a day, Snooze is able to use sleep data from previous days and weeks to project the best sleep times for her.

Elizabeth can see her sleep history with the sleep statistics feature.

Snooze keeps track of how long she's slept throughout the week and when she's asleep based on phone data. Snooze then analyzes these patterns to plan out the most optimal times to sleep, so she has some consistency in an otherwise busy routine.

Education
Elizabeth can also access Snooze's library of courses about everything sleep related - from the best time management tips to the biology behind sleep cycles.

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Sign-Up Page
To start, Elizabeth can download Snooze and sign up with her email, Facebook, or Google.

Snooze can also quickly import data from her Google Calendar or Facebook events to make logging in her schedule easier.

User Inputs Schedule
Next, Elizabeth will be prompted to either manually input her schedule or sync her calendar to train Snooze.

Snooze will use this information to find an optimal sleep schedule that works around her schedule and commitments.

Education
As a night shift nurse, she can join the appropriate community to connect with others, share her sleep experiences, and make new friends with its built in forums and messaging system.

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